

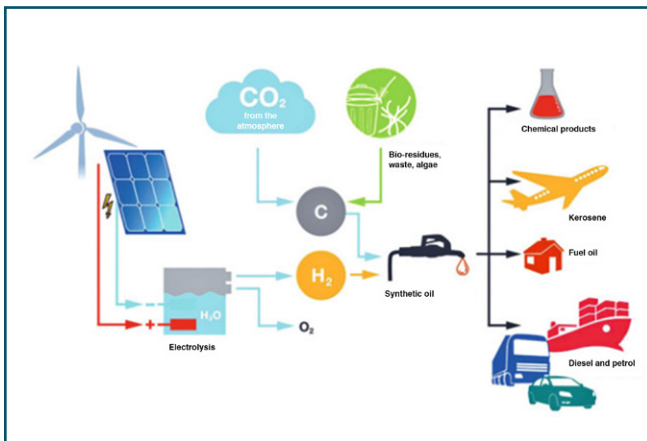


Synthetic fuels

Synthetic petrol (eFuel)

Synthetic fuels bind CO₂ during production. The greenhouse gas thus becomes a raw material and, with the help of regeneratively generated electricity, can be used to produce gasoline, diesel or gas. Another key advantage of this solution is that the existing filling station network can continue to be used.

The same applies to the existing know-how in combustion technology. And although electric cars will become significantly cheaper in the next few years, the development of fuels could be worthwhile. Bosch has calculated that, depending on the cost of the renewable energy used, a hybrid powered by eFuels could be cheaper than a long-distance electric car up to a maximum mileage of 160'000 kilometers.



Basic process for synthetic fuel



Overview of the CAPHENIA process

CO₂ and water from the air: a technology has been developed at ETH Zurich that can be used to produce liquid fuels from sunlight and air. During combustion, they only release as much CO₂ as was previously extracted from the air. Both CO₂ and water are separated directly from the ambient air

and split using solar energy. The synthesis gas, a mixture of H₂ and CO, is then used to produce kerosene, methanol or other hydrocarbons.

Source: <https://caphenia.com/de/technologie>